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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,115	08/06/2001	Arthur H. Barnes	10010364-1	9547
7590	12/03/2003		EXAMINER	
HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400			SOHN, SEUNG C	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/923,115	BARNES, ARTHUR H.
	Examiner Seung C. Sohn	Art Unit 2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 September 2003.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-13 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 19 March 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the print media supply in claim 1-8, the hard copy apparatus structure in claims 1-4 and 8, the supply and the printing zone in claim 8, and the light emitter and the light detector in claims 9-13** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. **Claims 8 and 12-13** are objected to because of the following informalities:

On claim 8, line 15, “a known print medium” after “stacked sheets of” should be changed to – the known print medium -.

On claim 12, line 4, “a paper” before “transport path” should be changed to – the print media -.

On claim 12, line 4, “of said print media” after “transport path” should be removed.

On claim 13, line 3, "a light beam" after "projecting" should be changed to – the light beam -.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. ***Claims 1, 5-8, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph***, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **On claim 1**, it is unclear what the difference between "an apparatus structure" and "a hard copy apparatus structure" is. Clarification is required. **On claim 5**, line 6, "a first type of print medium" is unclear and confusing. Does it refer to a print medium in line 3 or another print medium? Clarification is required. **On claim 6**, "the light" or "the transmissive light" is used at various places for beaming or impinging both the first and second types of print medium. Clarification is required that which light is for impinging the first type of medium and which light is for impinging the second type of print medium. And, "a second type of print medium" is unclear and confusing. Does it refer to a print medium in claim 5, line 3 or another print medium? How many types of print mediums are there? Clarification is required. Also, it is required that two profiles in claims 5-6 to be clearly classified. **On claim 7**, line 2, "a print medium" is unclear and confusing. Does it refer to a print medium in claim 5, line 3, the first type of print medium, the second type of print medium

or another print medium? Clarification is required. **On claim 8**, "the hard copy apparatus structure" in line 4 lacks an antecedent basis. **On claim 12**, lines 5-8, "a reflective element and absorptive element" is confusing with "a reflective element and a non-reflective element" in claim 9. Clarification is required. **On claim 13**, "the print media" in line 4 after "beam through" lacks an antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. ***Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lisnyansky et al. (Patent No. US 5,047,652).***

Referring to claim 1, Lisnyansky et al. discloses the following steps of Applicant's claim:

- a) transporting a print medium (12, i.e., moving web) for a print media supply along a paper path (18) and over an apparatus structure (22, i.e., backing roll) positioned in the paper path, a hard copy apparatus structure including a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing);
- b) beaming transmissive light through the print medium (Col. 8, lines 35-40);

- c) impinging the transmissive light onto the reflective element (Col. 11, lines 53-64);
- d) impinging the transmissive light onto the non-reflective element (Col. 11, lines 53-64);
- e) sensing a reflected light from the reflected element and the non-reflective element (Col. 8, lines 56-60);
- f) recording data representative of light reflection and light absorption (Col. 6, lines 14-30); and
- g) comparing recorded data from said recording to predetermined data representative of a known print medium thickness and a known print medium transmissivity (Col. 6, lines 31-44).

Referring to claim 2, Lisnyansky et al. discloses the step of recording transmissive light levels of the print medium over a lightwave reflective element ("white"), and recording transmissive light levels of the print medium over a lightwave absorptive element ("black") (Col. 6, lines 45-60).

Referring to claim 3, Lisnyansky et al. discloses that when no match between said recorded data and said predetermined data is obtained, storing said recorded data as a new print medium data file (Col. 3, lines 57-65).

Referring to claim 4, Lisnyansky et al. discloses that the method as set forth in claim 1 embodied in computer code (Col. 5, lines 53-62).

Referring to claim 5, Lisnyansky et al. discloses the following steps of Applicant's claim:

- a) transporting a print medium (12, i.e., moving web) for a print media supply along a paper path (18) and over an apparatus structure (22, i.e., backing roll) positioned in the paper path, the apparatus structure including a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing);
- b) beaming transmissive light through a first type of print medium (Col. 8, lines 35-40);
- c) impinging the light onto surface ("white") reflective of the light and a surface ("black") absorptive of the light (Col. 10, lines 5-10);
- d) recording a profile representative of light reflection and light absorption (Col. 10, lines 28-31), and
- e) storing said profile in a memory with an identifier associated with said first type of print medium (Col. 5, lines 57-62).

Referring to claim 6, Lisnyansky et al. discloses the following steps of Applicant's claim:

- a) beaming transmissive light through a second type of print medium (Col. 8, lines 35-40);
- b) impinging the light onto a surface reflective of the transmissive light and a surface absorptive of the light (Col. 10, lines 5-10);
- c) recording a profile representative of light reflection and light absorption (Col. 10, lines 28-31); and

d) storing said profile in a memory with an identifier associated with said second type of print medium (Col. 5, lines 57-62).

Referring to claim 7, Lisnyansky et al. discloses said memory is used as a lookup table for identifying a print medium (Col. 5, lines 57-62).

Referring to claim 8, Lisnyansky et al. discloses the following steps of Applicant's claim:

- a) transporting a print medium (12, i.e., moving web) for a print media supply along a paper path (18) and over an apparatus structure (22, i.e., backing roll) positioned in the paper path, the hard copy apparatus structure including a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing);
- b) beaming transmissive light through the print medium (Col. 8, lines 35-40);
- c) impinging the transmissive light onto the reflective element (Col. 11, lines 53-64);
- d) impinging the transmissive light onto the non-reflective element (Col. 11, lines 53-64);
- e) sensing a reflected light from the reflected element and the non-reflected element (Col. 8, lines 56-60);
- f) recording data representative of light reflection and light absorption (Col. 6, lines 14-30);

- g) storing second data representative of media thickness and transmissivity of at least two stacked sheets of a known print medium;
- h) recording third data representative of current medium thickness and transmissivity during transport of said current medium from a supply toward a printing zone; and
- i) comparing said third data to said first and second data.

Referring to claim 9, Lisnyansky et al. shows in Figs. 1, 2 & 9 the following elements of Applicant's claim:

- a) light emitter (Fig. 2, 48, i.e., xenon flash lamp, Col. 8, lines 35-40) positioned in a linear transport region of a print media transport path (18), for directing a light beam across the print media transport path, the light beam having predetermined intensity and wavelength for penetrating a sheet of print media in said print media transport path (Col. 8, lines 25-34);
- b) a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing) mounted to an apparatus structure (Fig. 1, 22 or Fig. 9, 180, i.e., backing roll) positioned in the print media transport path (Col. 11, lines 53-64), the reflective element and the non-reflective element aligned with the light emitter; such that said light beam is received by the reflective element and the non-reflective element after passing through the sheet of print media in said print media transport path (Col. 10, lines 5-10); and

c) a light detector (Fig. 2, 88, i.e., photodiode array, Col. 8, lines 56-60) positioned in the linear transport region of the print media transport path (18) providing an output signal indicative of thickness and transmissivity of the sheet (Col. 6, lines 14-30).

Referring to claim 10, it is inherent that said output signal further comprises a first level when no print media is interrupting the beam, a second output signal indicative of a single sheet of print media interrupting the beam, and at least one other signal level indicative of multiple sheets of print media interrupting the beam.

Referring to claim 11, Lisnyansky et al. discloses said output signal is a first signal when no paper is interrupting the beam, a second signal when the sheet of paper is interrupting the beam over a reflective surface, and a third signal when the sheet of paper is interrupting the beam over an absorptive surface (Col. 6, lines 35-41).

Referring to claim 12, Lisnyansky et al. discloses mounting means (140) for scanning said beam across a paper transport path of said paper wherein a reflective element ("white") and absorptive element ("black") are mounted transverse to said transport path such that the sheet of paper passes between said mounting means and said reflective element and absorptive element (Col. 10, lines 44-56).

Referring to claim 13, it is inherent that the emitter means may be an LED optical emitter mounted for projecting a light beam through the paper wherein the light beam has a predetermined intensity and wavelength for penetrating and being reflected back through at least two sheets of print media.

Response to Arguments

7. Applicant's arguments filed on September 15, 2003 have been fully considered but they are not persuasive. Lisnyansky et al. clearly shows a hard copy (i.e., paper) apparatus structure (Fig. 1, 22 or Fig. 9, 180, i.e., backing roll) including a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing). Lisnyansky et al. also shows a reflective element (Fig. 9, 184, i.e., "white" optical standard backing) and a non-reflective element (Fig. 9, 186, i.e., "black" optical standard backing) mounted to an apparatus structure (Fig. 1, 22 or Fig. 9, 180, i.e., backing roll) positioned in the print media (i.e., paper) transport path (Fig. 1, 18) (Col. 11, lines 53-64).

Conclusion

8. Claims 1-13 are rejected.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JCS
SCS
November 29, 2003

